



Diversity of economic instruments to finance environmental service provision and sustainable land-uses: A transaction cost economics perspective

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Objective: To obtain a classification of schemes that finance and/or incentivize the provision of ES without exclusions

Overview:

- Cases
- Direct classifications
- Transaction cost economics
- Link to nature related transaction
- Further steps

Schemes for the provision of hydrological services

- ESPH-PROCUENCAS, Costa Rica
- PES Pimampiro, Ecuador
- Regional Water Fund (FORAGUA), Ecuador
 - Municipality of Celica
 - Municipality of Loja
- RWA Los Negros, Bolivia
- Water Fund for Life and Sustainability, Colombia
- ...

ES provider based classification

- **Contracts versus land purchases**
- **PES and non-PES or PES-like**
 - Land purchases, investment in ES, not PES (Rojas and Aylward, 2003)
 - E.g. PES Pimampiro versus FORAGUA Loja

ES “Buyer” Based classification

- **Municipalities and municipal water companies**
 - FORAGUA Celica
 - Los Negros
 - **Private companies**
 - ESPH-PROCUENCAS
 - **Water user associations**
 - Los Negros
 - Water Fund for Life and Sustainability, Colombia
- ❖ All use a type of environmental charge on water

Transaction Costs Economics Theory

- The **transaction** '*is the basic **unit of analysis***'
(Williamson, 1985)
- Institutions as rules
- Governance structures as the organizational solutions for making rules effective
(North 1990)

Transaction Costs Economics Theory

- **Types of transaction costs**
 - Information;
 - Decision making;
 - Enforcement costs
- **Influenced by**
 - Asset specificity
 - Uncertainty
 - Frequency
- **Determine the governance form**
 - Markets, hybrids and hierarchies
- **Characterized by**
 - Contracts law
 - Incentive intensity
 - Administrative control

PES and land purchases in basic TCE

- PES Pimampiro
 - **Water tariff fixed contractual payment**
 - **Contract** between landholders and Pimampiro's municipal water company
 - Monetary **incentives**
 - Providers **monitored** for compliance
- FORAGUA, Loja (land purchases)
 - **Water tariff fixed contractual payment**
 - **External fund management**
 - **No contract**
 - Incentive not external, except **legal obligation** to invest water fund
 - Watershed **protection** by municipal water company
- Pimampiro's PES closer to **markets** and Loja's land purchases closer to **hierarchies (hybrids)**
- Frequency: Daily water use/flow, number of water users
- Uncertainty: Trust in compliance by landholders
- Asset Specificity: No extra investment in water treatment plant

Nature related transactions

- *“A transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins” (Williamson 1985).*
- Different Properties
 - Mobility
 - Separability
 - Complexity (knowledge problem)
 - Difficulties to standardise

(Hagedorn, 2008)

- Role of governments

Theoretical Options

- Revised TCE framework
- Public Private Partnership
(e.g. Van Huylbroeck et al., 2009)
 - Role of governance costs
- Integrative and segregative institutions
(Hagedorn, 2005)
 - How consequences of decisions made by actors are dealt with under a set of rules

Concluding remarks

- TCE more appropriate to be able to compare instead of exclude different mechanisms
- Focus on all transactions: Human-nature related, financial and property right transactions
- Focus on providers and beneficiaries
- Power relations
- But...danger of becoming too situation specific

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Thank you

Gracias